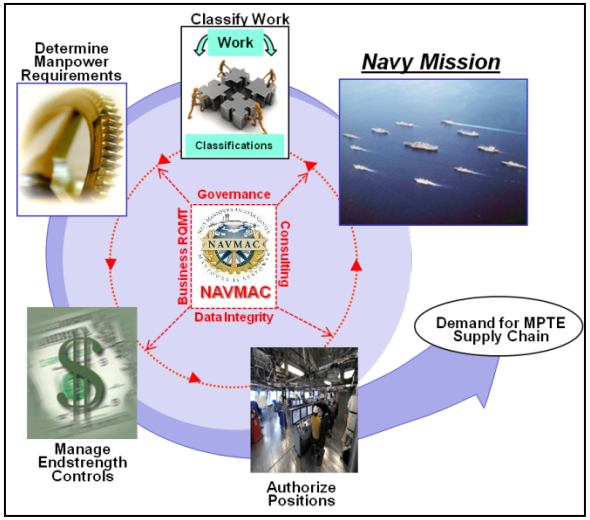
Aviation Manpower Requirements
Code 30

Navy Manpower Analysis Center

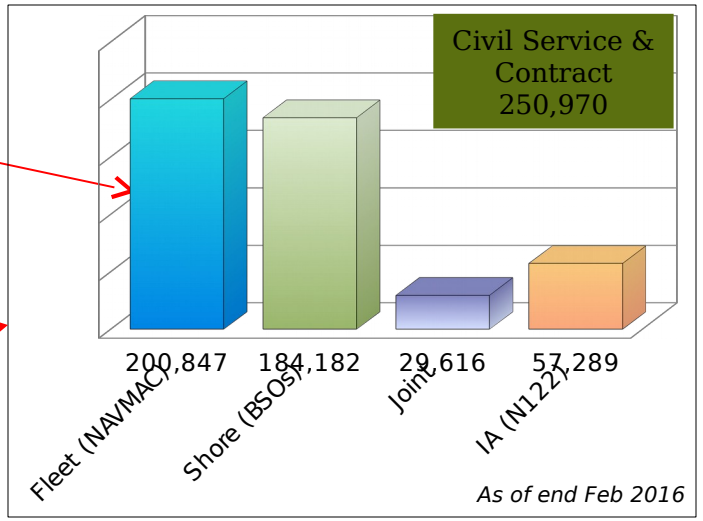
Defining the Demand Signal for MPTE Supply Chain

- Vision: We lead the Navy in manpower solutions
- Mission: We define, translate, classify the Navy's work into a workforce structure and position demand signal to sustain a combat ready force
- Core Functions:
  - Navy's Occupational Classification Systems
  - Fleet Manpower Requirements Determination
  - Navy's Manpower Management Program Administration
  - Navy's Manpower Information System Business RQMT
- Output:
  - Valid manpower requirements for all ships and squadrons
    - 201,000 RQMTs - 43% of Navy Military RQMTs
  - Effective Jobs & Qualifications for military human resource mgmt
    - Military human resource structure (Rating, NEC, NEBC, Designators, AQD, NOBC, SUPSPEC)
  - Effective manpower management processes & policies for delivery of the manpower demand signal
    - Navy's authoritative 6,260 Activity Manpower Documents

Civil Service & Contract 235,792



$16B *(fully funded)*



Adding value by properly defining Navy's work to create accurate manpower

Department's Primary Mission

It's All About Fleet Readiness…

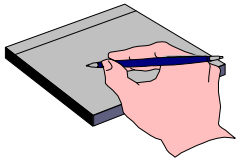
MISSION: Analyze & determine in accordance with OPNAVINST 1000.16L, the minimum **QUANTITY** and **QUALITY** of manpower required to accomplish 100% of Squadron capabilities as defined in the latest approved ROC/POE.

Aviation Products and Customers

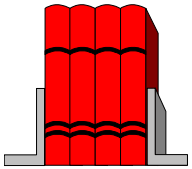
- Products
  - Squadron Manpower Documents (SQMD)
  - Manpower Requirements Worksheet (MRW)
  - Preliminary SQMD
    - Created by NAVAIR
    - Checked by NAVMAC for policy compliance
- Customers
  - Force Commanders
  - All Fleet Squadrons
  - All FRSs, VX-1 & VX-9
  - Afloat AIMD, SEAOPDET, VANOPDET

SQMD Methodology

ROC/POE

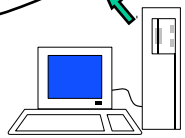


STAFFING STDS



SQUADRON MANPOWER REQUIREMENTS COMPUTER SYSTEM (SQMRS)

STATISTICAL MODELS BASED ON HISTORIC CM (NALDA) CURRENT PM (MRC)



ON-SITE VALIDATION

DRAFT SQMD

RECLAMA

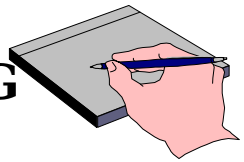
ADJUDICATION

LOAD INTO TFMMS

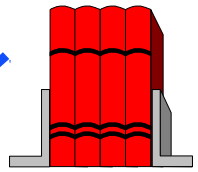
SQUADRON

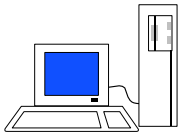
MRW Methodology

TASKING



AIRCRAFT MAINTENANCE DATABASE





MAINTENANCE VALUES

DRAFT MRW

LOAD DRAFT INTO TFMMS

***ON-SITE VISIT**

RECLAMA

FLEET FORCES/TYCOM

ADJUDICATION (N12)

LOAD INTO TFMMS

SHIP/SEAOPDET AMDs

Major Data Sources

- NAVAIR Logistics Data Analysis (NALDA):
  - Documented Corrective Maintenance by:
    - Type/Model/Series Aircraft
    - Type Equipment
    - Production Work Center

- NAVAIRSYSCOM:
  - Preventive Maintenance and scheduled inspection requirements.

Other Data Sources

- ROC/POE (Required Operational Capabilities/ Projected Operational Environment)
- TYCOM Tasking Letter
- CNO/N1/N98 Directed Functions
- Staffing Standards
- On-Site Workload Measurement (non-NALCOMIS)
- Naval Aviation Maintenance Program (NAMP) COMNAVAIRFORINST 4790.2 Series
- Production Planning Factors (PPFs) for FRS

AIMD Maintenance Values

- Reported maintenance data from NALDA by T/M/S and equipment supported for:
  - Aircraft Maintenance (**AM**)
  - Support Maintenance (**SM**)

- Maintenance data for all deployed carriers is reviewed annually and updated as required

Required Operational Capability/ Projected Operating Environment

- ROC: Defines the Mission, Functions and Tasks your aircraft platform is to perform.

- POE: Defines the minimum capabilities or parameters to accomplish your aircraft platform's operations.
  - Aircraft Utilization (flight hours / month)
  - Sortie Length
  - Crew / Seat Ratio
  - Primary Aircraft Authorized (PAA)
  - Additional Manpower Requirements

TYCOM Tasking Letter

- Tasking Letter:
  - The most critical element in developing the MRW
  - Identifies:
    - Aircraft type/model/series (T/M/S) and number
    - SEAOPDET Identification/Location
    - Quantity and type of test bench/equipment

SQMD Development

- During SQMD development, we use:
  - Naval Aviation Maintenance Program (NAMP) to define overall SQMD. States a need for work centers that aren't directly tied to the maintenance of aircraft but, play a vital role in the effort. Examples: Quality Assurance, Maintenance Control, Maintenance Administration and Material Control.
  - Staffing Standards to determine support/non-production work center requirements.
  - Measured Workload Equations to determine production work center requirements.

Staffing Standards

- Staffing Standards are either Directed or Engineered.
  - A Directed Staffing Standard is a requirement specified by instruction/policy (CMC, DAPA, etc.) not otherwise tied to any countable item/event factor.
  - An Engineered Staffing Standard is a relationship between man-hours and a specified set of tasks, written as an equation with at least one countable item/event factor and includes an optimized distribution of both quantity and quality manpower (YN, PS, etc.).

Engineered Staffing Standard

Number of Personnel Assigned Example

Yeoman Calculation

$$\frac{(.7290)\ (X)}{\textbf{70 Hour Work Week}}$$

X = Total Officer/Enlisted Requirements
X = 236

172.044 divided by 70(work week) = 2.45 = **3 requirements**

Staffing Standards

* CMDCM
* CCC
* DAPA
* SAFETY PO
* MC MCPO/CPO/FDC

MC CLERKS

MAINT ADMIN

* DATA ANALYSTS
* DIV CPO
* HAZMAT

TOOL ROOM / IMRL PO

* PHASE SUPERVISOR

TROUBLESHOOTERS

TRAINING CLERKS

* QAR
* TECH PUB LIBRARIAN

YN/PS

OPS CLERK

*Directed Staffing Standard

Workload Elements

for Production Work Centers

- Administrative Support (AS)
  - Applied to all production work centers
- Facilities Maintenance (FM)
  - Applied using janitorial handbook - based on shop size
- Utility Tasking (UT)
  - Applied to production work centers that deploy on aircraft carriers
- Support Action (SA)
  - Applied based on mission of work center and T/M/S

Workload Elements (cont)

- Preventive Maintenance (PM)
  - Collected from the Maintenance Requirement Cards (MRC) deck for each Type/Model/Series aircraft assigned to your activity.
  - Conditional Inspections are extracted from NALDA and used in our CM workload calculation.
- We then apply:
  - 17 percent Make Ready/Put Away (MR/PA) allowance to total PM for work center.
- Some T/M/S will have models developed to predict PM based on actuals, but that will be the exception

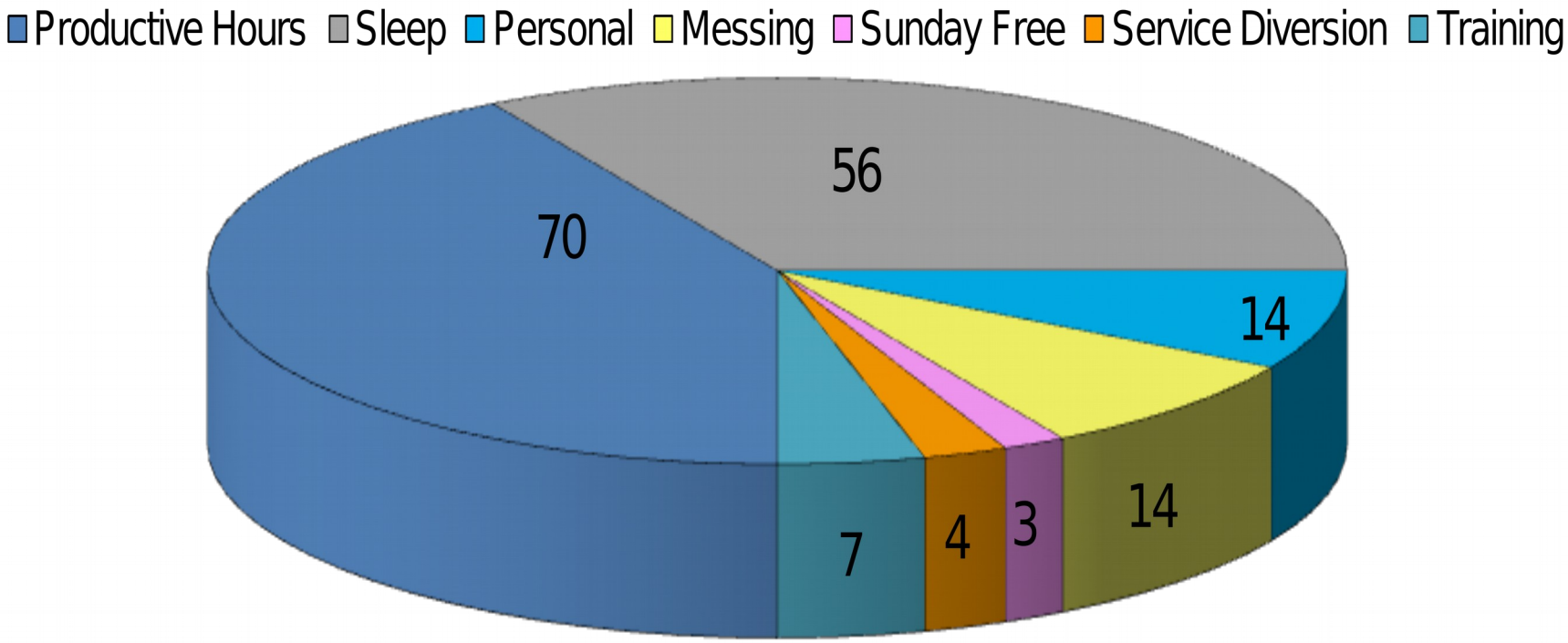
Workload Elements (cont)

- Corrective Maintenance (CM)
  - Your reported maintenance data is used in the development of our T/M/S maintenance predictor model. This data is retrieved directly from Naval Aviation Logistics Data Analysis (NALDA) database.
  - A maintenance model is developed using regression analysis process and industrial engineering practices and tools to predict future workload for the aircraft.
  - Up to an 8% Production Delay (PD) allowance is applied to the work center PM and CM calculations.

Navy Standard Productive Availability Factors

- Squadron Personnel at Sea - 70 hours
  - VAQ, VAW, VFA
  - HSC, HSM etc.
- Shore Based Deployable - 60 hours
  - VP, VR and VQ
  - Expeditionary HSC and VAQ etc.
- Shore Based - 33.38 hours
  - Fleet Replacement Squadrons, VX etc.

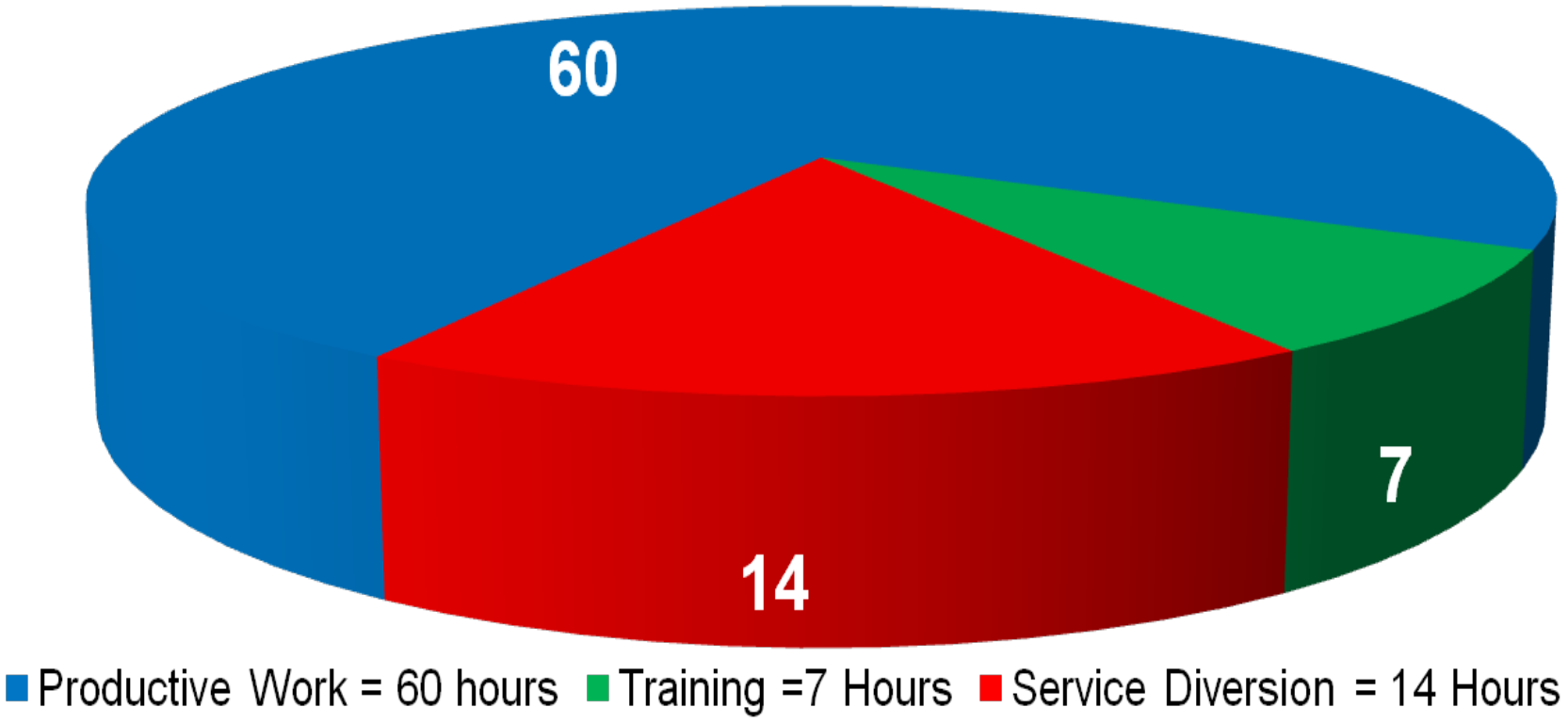
Squadron Personnel at Sea Productive Availability Factor



OPNAVINST 1000.16L – Appendix D

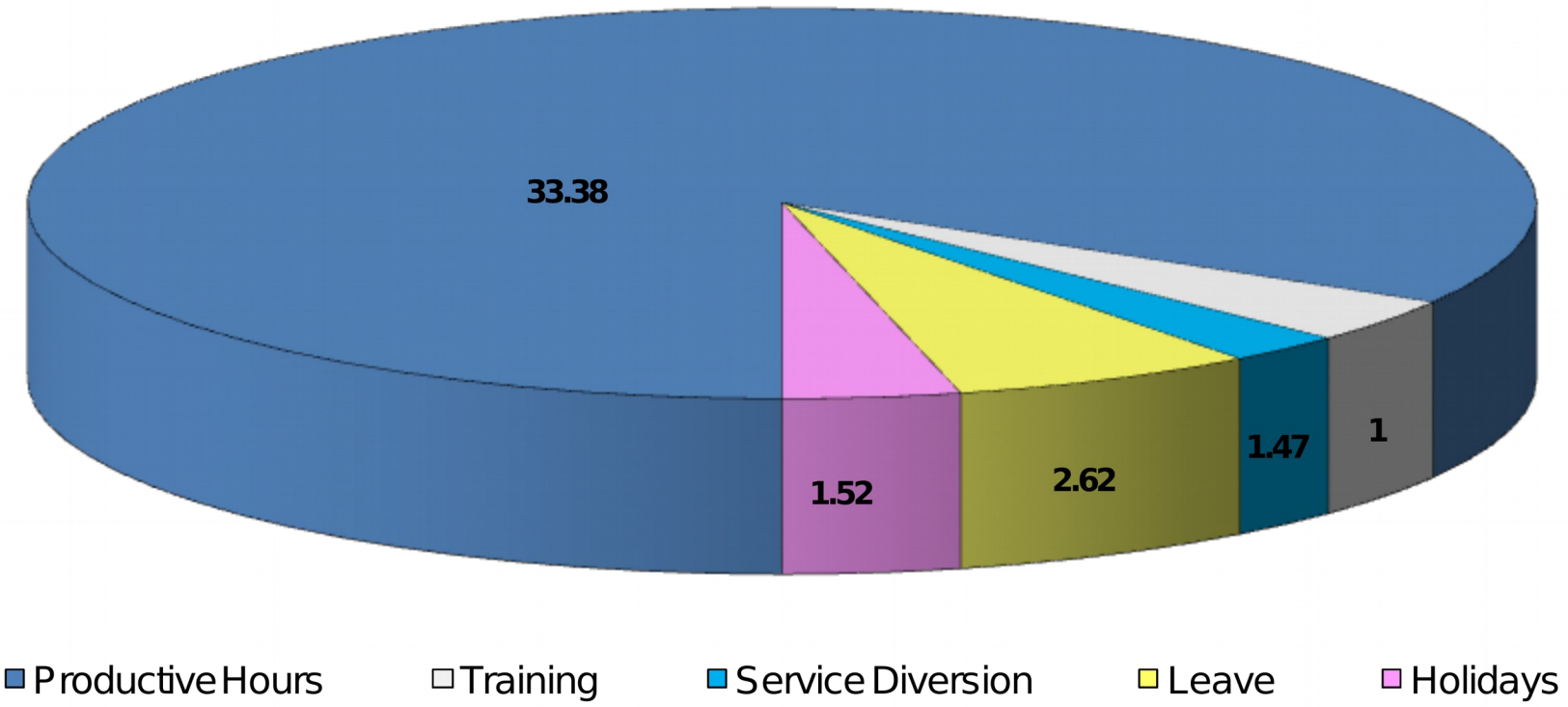
81 Potential Work Hours per week

Shore Based Deployable Productive Availability Factor



Only shows the same 81 Potential Work Hours per week

Shore Based Productive Availability Factor



40 Potential Work Hours

Workload Equation Example

W/C 110 (*example carrier based)*

$$\frac{\text{AS + FM + UT + SA + PM + CM (HRS/WK)}}{\text{Productive Work Week}}$$

$$\frac{154 + 5 + 6 + 306 + 105 + 242}{70 \text{ Hour Work Week}}$$

818 / 70 = 11.68 or **12 Requirements = Quantity**

Paygrade Matrix = Quality

Paygrade Matrix

W/C 110
Example

PAYGRADE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
E-8											1	1	1	1	1	1	1	1
E-7	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3
E-6		1	1	1	2	2	2	3	3	3	4	4	4	4	4	5	5	6
E-5	1	1	1	2	2	2	3	3	4	4	4	4	5	5	6	6	7	7
E-4																		

AIMD Production Work Center

Work center Requirement = $\frac{AM + SM + AS}{70}$

Where “AM” = Calculated Aircraft Maintenance by T/M/S
“SM” = Calculated Support Maintenance by equipment
“AS” = Calculated Administrative Support by Work Center

Total requirements are then applied to specific staffing tables for paygrade assignment to meet NEC requirements and distribution.

Officer and Aircrew Requirements

- Aircrew
  - Driven by Production Planning Factors (PPFs) for FRS
  - Driven by Crew Seat Ratio (CSR) & Primary Authorized Aircraft (PAA) for operational fleet squadrons.
    - CSR x PAA = Total Crews
    - Total Crews x Crew Positions = Total Aviators/Aircrew
- Ground Officers
  - As directed by instruction/higher authority, or as defined in the ROC/POE (Intel, Supply, AirSpeed, etc.).

On-site Visits

- They are not always required or feasible
- When site visits occur, they usually:
  - Precede document creation and are driven by changes to the ROC/POE, maintenance practices, or to validate changes to the Maintenance Predictor Model.
  - Involve like-squadrons on both coasts.
  - Include a comprehensive manpower determination brief.
  - Address specific areas of concern.
  - Ensure proper application of staffing standards.

Manpower Document Flow

- NAVMAC generates package (DSQMD or MRW)
- Draft SQMD is provided to US Fleet Forces (USFF)/Type Commander (CNAF)/Wings for distribution and review.
- Manpower issues are returned to NAVMAC as a Fleet Review and Comments package (Reclama).
- NAVMAC reviews, drafts recommendations on the issues, and submits the adjudication package to OPNAV N12.
- OPNAV N12 makes final adjudication decision and returns to NAVMAC for input to TFFMS.
- Requirements become “live” for distribution

Operational Reality

Manpower-vs.-Manning

…manpower requirements are only a part of the overall picture…

Requirements | **Endstrength** | **Authorization** | **Personnel**

RQMT

Work

MFT

Classify Work

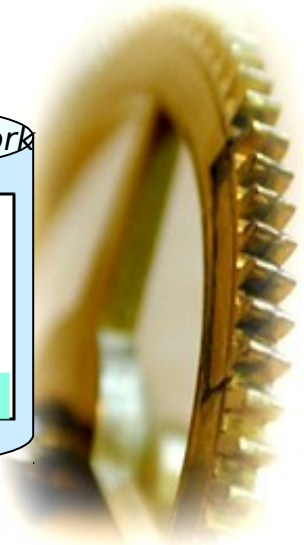
Work

Classifications

Work

ROC/POE
or
TASKING LETTER

Initial
Manpower
Specification

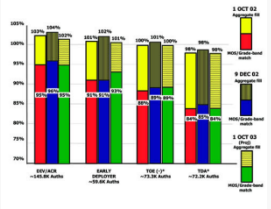


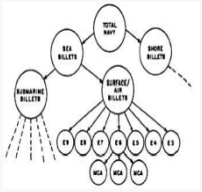
Funding

Authorization

Readiness
Gap
"Risk"

NMP





Navy Manning Plan

COB

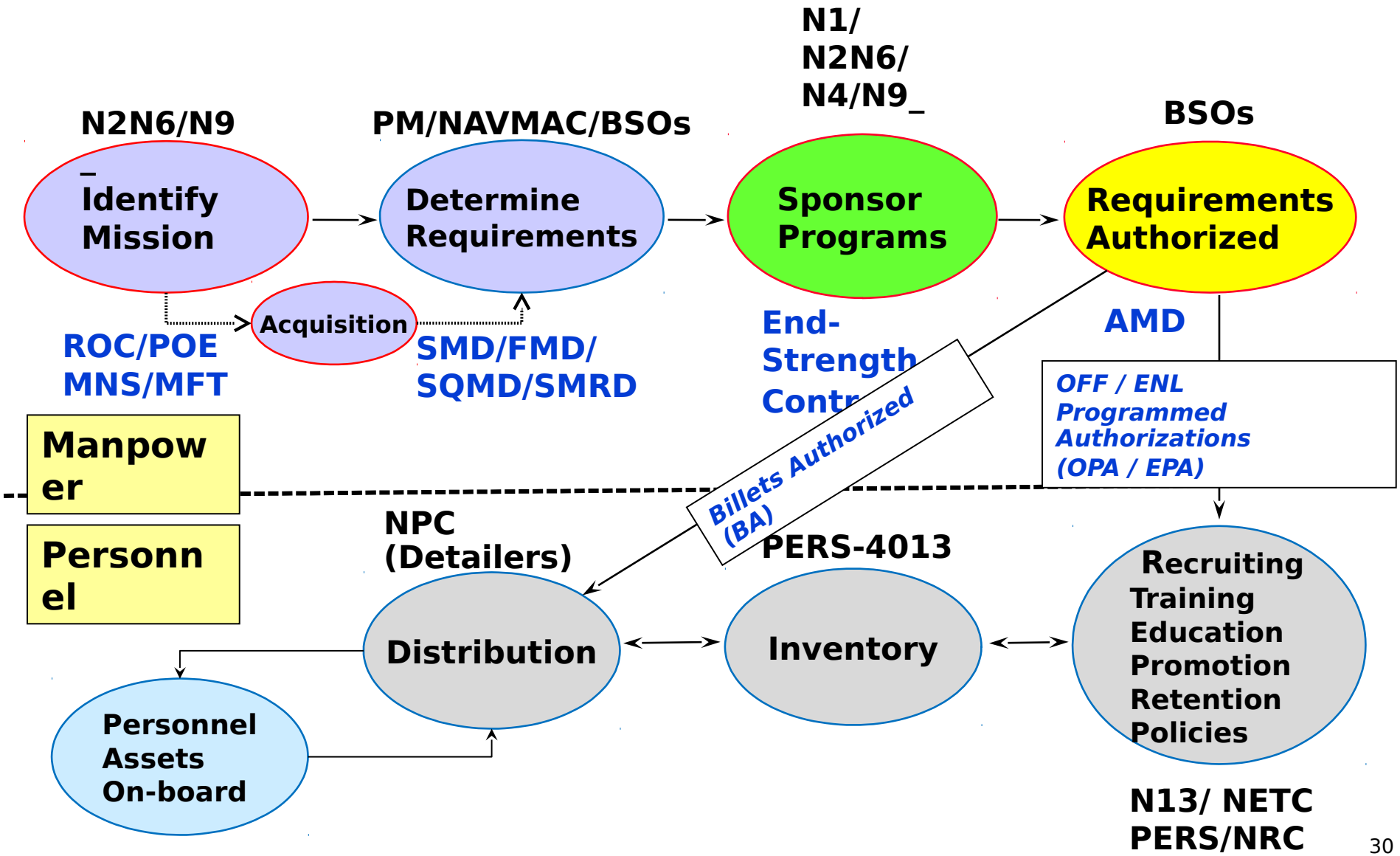
Current On-board

Places | **Controls** | **Demand** | **Faces**

NAVMAC Direct Work ***NAVMAC Support to N12***

Theoretical Manpower Process

High Level - Integration



Conclusion

- The ROC/POE is the foundation for squadron manpower determination.
- Aviation Staffing Standards are *guidelines* in the determination of overhead/support requirements.
- Manpower requirements are dynamic, the model must be continuously updated to ensure accuracy.
- NAVMAC web site

http://www.public.navy.mil/bupers-npc/organization/navmac/Pages/default2.aspx

Conclusion

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- Aviation Staffing Standards are guidelines in the determination of overhead/support requirements.
- Manpower requirements are dynamic, the model must be continuously updated to ensure accuracy.
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Code 30 Points of Contact

- **Aviation Dept Head 901-874-6244**
- **Deputy Dept Head 901-874-6240**
- **Aviation LCPO 901-874-6399**
- **SQMD Div O 901-874-6303**
- **SQMD Lead Analyst 901-874-6348**
- **Fixed Wing Lead Analyst 901-874-6231**
- **Rotary Wing Lead Analyst 901-874-6411**
- **AIMD Afloat Div O 901-874-6314**
- **AIMD Afloat Lead Analyst 901-874-6238**
- **DSN – 882, email is in NMCI Global**